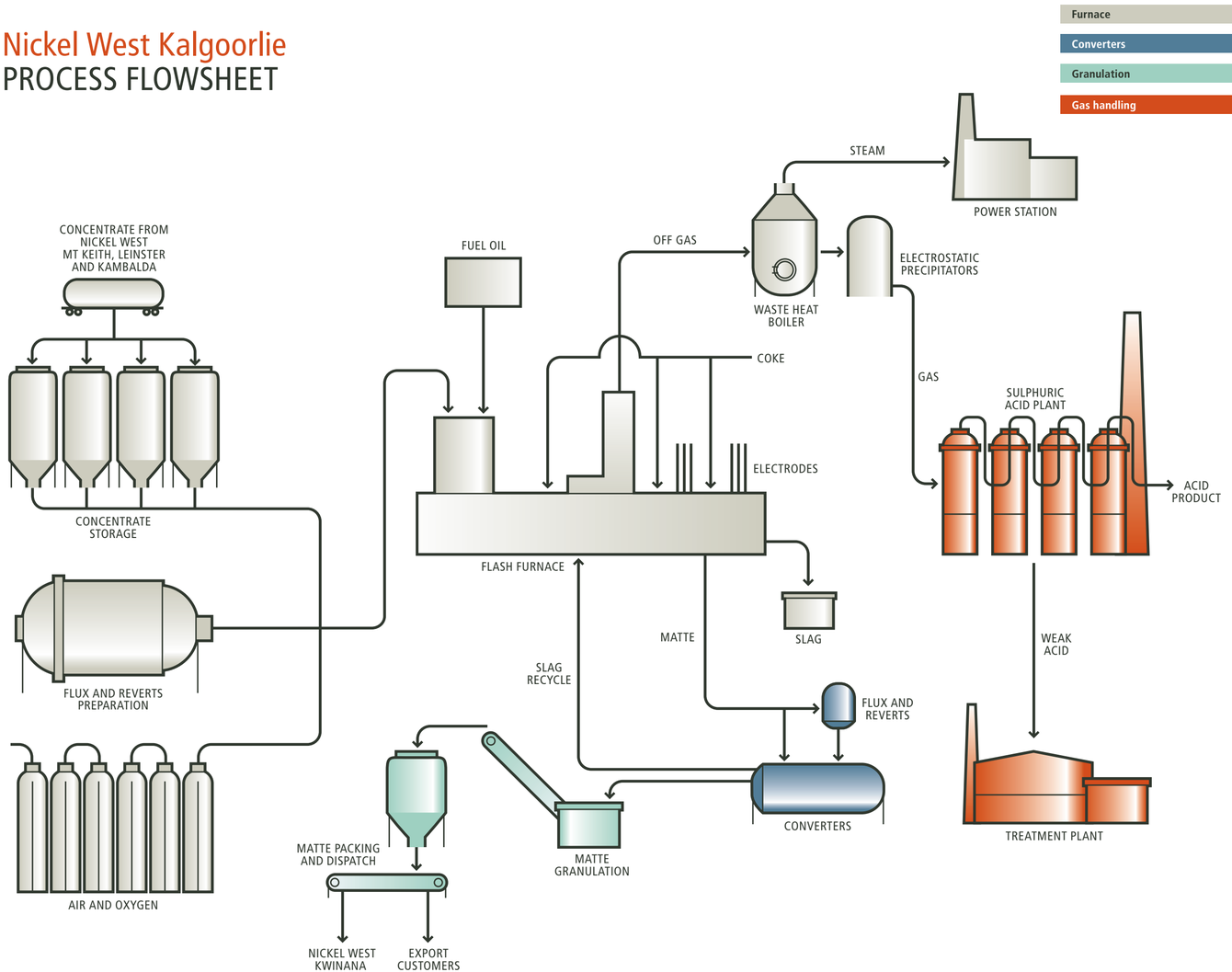
Nickel West Kalgoorlie
PROCESS FLOWSHEET



Nickel West

bhpbilliton
resourcing the future

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Nickel West Kalgoorlie and Kambalda
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About Nickel West

A member of the BHP Billiton group, Nickel West is a fully integrated nickel business comprising mines, concentrators, a smelter and a refinery, all located in Western Australia.

Nickel West has the capacity to produce around 100,000 tonnes of nickel each year, employs more than 3000 employees and operational contractors, and provides significant benefits to the Western Australian economy and to the communities in which is operates.

Nickel West understands the essential link between sustainable performance and long-term business viability, and has a comprehensive community participation program.

About Nickel West Kalgoorlie and Kambalda

Nickel West Kalgoorlie-Kambalda is located in the Goldfields region of Western Australia, approximately 600 kilometres east of Perth.

Kalgoorlie is a major regional city at the heart of the Western Australian nickel-goldfields. The discovery of gold in the area put Kalgoorlie on the map in 1893. Since then, the city has developed into a major service centre for Western Australia's thriving resources industry.

Nickel West Kalgoorlie

Located approximately 12 kilometres from the City of Kalgoorlie-Boulder, Nickel West Kalgoorlie incorporates a flash furnace, three converters and an acid plant.

The flash smelting process produces matte containing approximately 66 per cent nickel. The smelter has a capacity to produce up to 110,000 tonnes per annum of nickel in matte. In FY09 we exported approximately 30 per cent of our nickel matte production and we processed the remainder at Nickel West Kwinana.

Nickel West Kambalda

Nickel West Kambalda is adjacent to the township of Kambalda and comprises a concentrator plant.

The concentrator processes ore and concentrate purchased from third parties in the Kambalda region, producing concentrate containing approximately 14 per cent nickel. The concentrator plant has a capacity of approximately 1.6 mtpa of ore.

Updated June 2010

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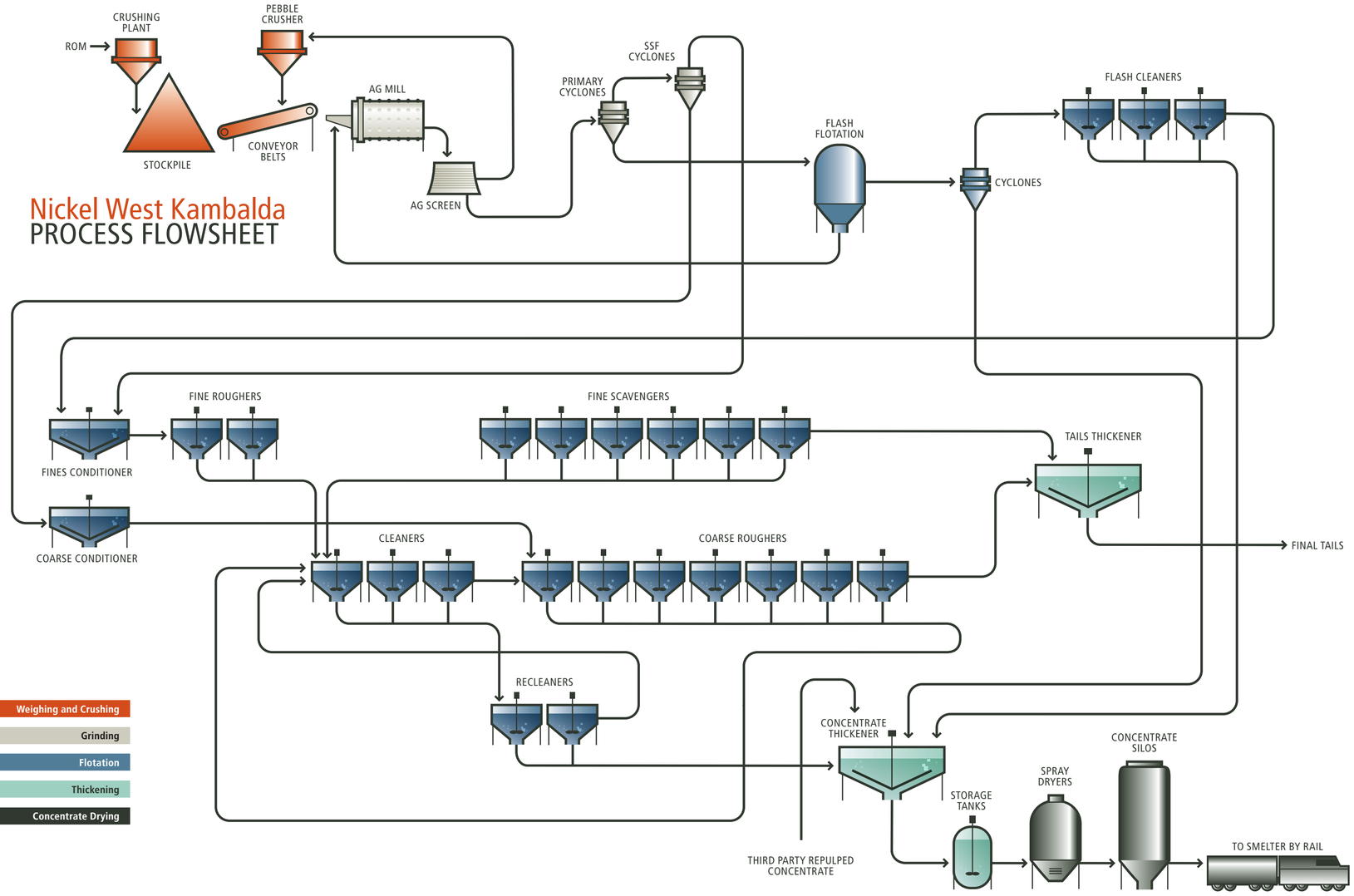

NICKEL WEST KAMBALDA

Weighing and Crushing

Ore from third party mines is delivered to the run-of-mine (ROM) pad. It is then fed through a jaw crusher, creating a coarse ore stockpile.

Grinding

The coarse ore is fed through a single-stage, fully autogenous (AG) grinding circuit.
A rotating mill wets and breaks the ore into finer fragments forming a slurry. A vibrating screen separates any material that has not been sufficiently ground and redirects it to a small cone crusher, after which it re-joins the grinding circuit.

Flotation

At this stage other minerals are separated from the nickel bearing slurry by liberating nickel sulphide minerals through the addition of chemicals producing nickel-in-concentrate of 13% purity. Air is also added, which forces the nickel compounds to float. Approximately 90% of the present nickel is recovered from these flotation tanks. The flash flotation cell also recovers coarse fast-floating nickel sulphide minerals from being redirected to the AG mill. These are cycloned and separated, with the underflow continuing to the final concentrate. The overflow is cleaned to remove magnesium oxide. Fine material from the grinding circuit is fed to the flash flotation cell.

Thickening

The recovered slurry is thickened by reducing the water content before drying, bringing the total concentration from 25% solids to 40% solids. Waste solids (tails) are pumped into tailings dams to be treated and recycled by the plant.

Concentrate Drying

Concentrate must contain less than 1% moisture to facilitate transport. A dryer circuit, consisting of storage tanks and spray driers, uses hot waste gas from the site gas turbine power station to dry the concentrate, enabling it to be transported to Nickel West Kalgoorlie for further processing.

NICKEL WEST KALGOORLIE

Furnace

An integrated flash furnace smelts the concentrate (12 – 15% nickel) into a matte product of approximately 48% nickel grade. The main function of the flash furnace is to remove iron from the process as an iron silicate slag. Slag and off gas are produced as a by-product of this process. Slag is disposed of on site, while the off gas is recovered to make acid. Waste heat is recovered via a boiler and the steam is used to produce power on site.

Converters

Flash furnace matte is fed through three cylindrical reaction vessels known as Pierce - Smith converters. Overhead cranes ladle the matte into the vessels, which are then injected with air. This produces a slag, which is periodically skimmed off the top to allow more matte to be added. The converter cycle is complete when the desired amount of iron has been removed. The final matte contains approximately 68% nickel.

Granulation

The high-grade nickel-matte product is taken by crane for granulation. This involves treatment with high volumes of water at low pressure, and transferred to a pond. The matte settles in the pond, forming 1-4mm granules. Granulated matte is drawn from the pond where it is separated either for export or for transportation to the Nickel West Kwinana for further processing.

Gas Cleaning

The recovered gas is cleaned and treated to produce sulphuric acid. The sulphuric acid is stored on site and is delivered to customers by road or rail.